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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,868	06/02/2004	Otis L. Nelson JR.	200405PM	3867

23688 7590 09/17/2008

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EXAMINER	
TOOMER, CEPHIA D	
ART UNIT	PAPER NUMBER
1797	
MAIL DATE	DELIVERY MODE
09/17/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/709,868	NELSON ET AL.	
	Examiner	Art Unit	
	Cephia D. Toomer	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *04 October 2007*.

2a)☒ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 30, 2008 has been entered.

Claim Rejections - 35 USC § 103

1. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Claims 1-16 are rejected under U.S.C. 103(a) as being unpatentable over Nelson ('723) in view of Demirbas (Current Advances in Alternative Motor Fuels).

Nelson discloses a motor fuel additive composition comprising (a) a fuel conditioner component and (b) a detergent component. The fuel conditioner (a) comprises (i) from 2 to 50 percent by weight of a polar oxygenated hydrocarbon compound and (ii) from about 2 to about 50 percent by weight of an oxygenated

compatibilizing agent. The detergent component (b) is selected from the group consisting of (i) a reaction product of a substituted hydrocarbon (A) and an amino compound (B), and (ii) a polybutylamine or polyisobutylamine (see abstract). The polar oxygenated hydrocarbon has an average molecular weight of from about 200 to about 500, and acid number of about 25 to 175, and a saponification number of about 75 to about 200 (col. 7, lines 11-33). The oxygenated compatibilizing agent has a solubility parameter of from about 7.0 to about 14.0 and moderate to strong hydrogen-bonding capacity (col. 7, lines 53-62). The hydrocarbon compound (A) of the detergent component is a substituted hydrocarbon of the formula R_1-X wherein R_1 is a hydrocarbyl radical having a molecular weight in the range of about 150 to 10,000 and X is selected from the group consisting of halogens, succinic anhydride and succinic dibasic acid (col. 4, lines 52-65). The amino compound (B) is of the formula $H—(NH—(A)_m)_n—Y—R_2$ wherein Y, A, m, n, and R_2 are identical to those in the instant claim 8 (col. 5, lines 1-21). The polybutylamine or polyisobutylamine is identical to that in instant claim 8 (col. 6, lines 30-46). Further, the composition includes other additives such as methyl tertiary butyl ether (MTBE) and ethyl tertiary butyl ether (ETBE), alcohols such as methanol or ethanol, and additives that are “typically employed in motor fuels” such as a common anti-knock additive, tetraethyl lead (col. 9, lines 56-60). Nelson also discloses examples wherein the additive composition was added to a base fuel in amounts between 40 ppm and 1000 ppm (col. 10, lines 44-50; col. 11, lines 14-20).

Nelson does not disclose: (i) the composition as specifically a biodiesel fuel additive composition, and (ii) the addition of the composition as simultaneously, before,

or after addition of the other additives, and (iii) an amount of from about 2% to about 100%, and up to 50% by volume of additive composition in biodiesel.

With respect to (i) above, it is the examiner's position that biodiesel is a type of motor fuel, so that the disclosed motor fuel additive composition of Nelson would generically read on a biodiesel fuel additive composition. Attention is drawn to Demirbas, which discloses alternative motor fuels, in which biodiesel is listed as one (see abstract).

Therefore, while Nelson is silent with respect to specifically biodiesel fuel, the generic usage of motor fuel encompasses biodiesel, and it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to utilize the composition of Nelson in a biodiesel fuel as disclosed by Demirbas.

With respect to (ii) above, regarding claims 6-8 and 12-14, although Nelson and Demirbas do not disclose addition of additive to a base fuel simultaneously, after or before any other additives, it is noted that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process", *In re Thorpe,* 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Further, "although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference

between the claimed product and the prior art product", *In re Marosi,* 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). See MPEP 2113.

Therefore, absent evidence of criticality regarding the presently claimed addition of additive to a base fuel simultaneously, after or before any other additives and given that Nelson and Demirbas meet the requirements of the claimed composition, Nelson and Demirbas clearly meet the requirements of present claims 6-8 and 12-14.

With respect to (iii) above, regarding claims 2-3 and 10-11, it is the examiner's position that the amount of additive composition is a result effective variable because changing it will clearly affect the type of product obtained. See MPEP § 2144.05 (B). Case law holds that "discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art." See *In re Boesch,* 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

In view of this, it would have been obvious to one of ordinary skill in the art to utilize amounts of additive composition including those within the scope of the present claims, so as to produce desired end results. Because of the effects of the detergent and conditioner components of the additive, the amount utilized in Nelson and Demirbas would be chosen accordingly in order to produce the desired biodiesel fuel with such properties.

Response to Arguments

Applicant's arguments have been fully considered but they are not persuasive.

Applicant argues that the fact that a class of additive compounds will provide benefit to a gasoline composition does not suggest that it will accelerate the combustion

phenomenon and reduce ignition delay in diesel engines, especially when the fuel is biodiesel. Applicant argues that unexpected synergistic benefits are obtained with the use of the additive in biodiesel.

The examiner acknowledges Nelson's preference for gasoline fuel. However, Nelson teaches that the additive composition may be employed in a wide variety of hydrocarbon or modified hydrocarbon fuels for a variety of engines. The fuel may also contain synthetic hydrocarbons such as esters and any conventional base fuel may be employed (see col. 9, lines 34-37, 49-54). This teaching in combination with Demirbas suggests what Applicant is claiming.

With respect to the alleged unexpected benefits, the examiner has reviewed the specification and does not find any example to support Applicant's allegations. Also, there are no examples that demonstrate the timing of when the additive is combined with biodiesel.

Applicant argues that Nelson provides no teaching of a reduction of particulate emissions in biodiesel and that biodiesel fuel is uniquely different from gasoline fuels.

Nelson teaches a composition wherein the additives are the same as set forth in the present claims. Nelson teaches that a variety of conventional fuels may be used. Therefore, Nelson provides the motivation to add the claimed fuel conditioner to fuel and Demirbas teaches that biodiesel is an alternative fuel that can be used to replace conventional petroleum fuels.

Applicant argues that the examiner takes a simplistic view of a complex fuel formulation art by assuming that the additives may be added or subtracted to produce any desired product without taking into consideration the complexity of the chemistry.

The examiner respectfully disagrees. What the examiner has done is set forth a prima facie case of obviousness based upon the prior art before her. Applicant provided no showings of the alleged beneficiary results obtained by adding the fuel conditioner of Nelson to a biodiesel, which is suggested by Nelson. The examiner recognizes that all fuel additives are not beneficiary to all fuels. However, Nelson sets forth that the fuel conditioner of his invention provides beneficial properties to a wide variety of fuels for a variety of engines, which encompasses biodiesel fuel.

Applicant argues that a fair reading of Demirbas discloses simply that there exist alternative fuels which are diverse and may include biodiesel. Applicant argues that the use of biodiesel as a fuel is an emerging technology in direct competition with traditional petroleum fuels.

Demirbas teaches that the most popular alternative fuels include biodiesel. Demirbas teaches that these fuels are important because they replace petroleum fuels because they are economical and environmentally friendly. Nelson teaches that additives may be used in a wide variety of fuels and Demirbas clearly teaches that the biodiesel would fall within the scope of these fuels.

All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the

grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cephia D. Toomer whose telephone number is 571-272-1126. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cephia D. Toomer/
Primary Examiner
Art Unit 1797

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